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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,827	02/12/2002	Edward C. McKinney JR.	SHPR-01041USQ	8062
			SRM/SDS	
			EXAMINER	
			TRAN, THAO T	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/074,827

Applicant(s)

MCKINNEY ET AL.

Examiner

Thao T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-22,30-35 and 37-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-22,30-35 and 37-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This is in response to the Amendment filed on 5/30/2006.
2. Claims 1, 4-22, 30-35, 37-49 are currently pending in this application. Claim 37 has been amended.
3. The rejections of the claims in the prior Office action are maintained as follows.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-22, 30-35, 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. (US Pat. 5,290,343).

Morita discloses an electrostatic precipitator for cleaning air, the precipitator comprising an air inlet, an air outlet, discharge electrodes 106, 10, and collector electrodes 105, 15 (see Figs. 1, 4, 6-7, and 12). The dust collector 15 comprises a multiple electrode sheets 14 (see Fig. 12). Morita further discloses the discharge electrodes and the dust collector 15 are detachably mounted on the frame 20. The discharge electrodes are connected to handles 34 whereas the dust collector electrodes are connected to handle 38, so that the electrodes can be easily removed from the frame for cleaning (see col. 7, ln. 52-61; col. 8, ln. 4-29).

Morita does not teach the electrodes to have the configuration and size as presently claimed. However, it would have been obvious to one of ordinary skill in the art, at the time the

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invention was made, that the configuration and size of the electrodes would have been designed in a way that would have brought more benefits depending upon user's preference and intended use. A hollow electrode, for example, would have been lighter and easier to handle, and a U shape would have provided more surface area to collect more dust particles, and thus providing better air quality.

With respect to the position of the electrodes relative to one another, although Morita does not disclose the electrodes in the positions as presently claimed, it would have been obvious to one of ordinary skill in the art that the position of an electrode would have no significant patentable weight. The position of an electrode would have been adjusted to obtain the desired results in the airflow. See MPEP 2144.04 IVA, IVB, VIC.

6. Claims 1, 4-22, 30-35, 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahlborn et al. (US Pat. 6,635,105), cited in the IDS of 4/11/2005.

Ahlborn discloses an electrostatic precipitator, comprising an emitter electrode 2 having emitting needle 2A, a collector electrode 1A, and a cleaning mechanism 3 to clean the emitting needle 2A (see Fig. 1; col. 2, ln. 14-55). The collector electrode 1A has an elongated cylindrical shape.

Ahlborn differs from the presently claimed invention in that the reference does not teach a plurality of electrodes arranged in array. However, it would have been obvious to one of ordinary skill in the art that duplication of parts would have no significant patentable weight. A plurality of the emitting electrodes would have enhanced the ionization of particulate matter and a plurality of the collecting electrodes would have enhanced the collection of particulate matter, providing more efficient cleaning of the air.

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With respect to the position of the electrodes relative to one another, it would have been obvious to one of ordinary skill in the art that the position of an electrode would have no significant patentable weight. The position of an electrode would have been adjusted to obtain the desired results in the airflow. The same arguments apply to the configuration and size of the electrodes. See MPEP 2144.04 IVA, IVB, VIC.

7. Claims 1, 4-22, 30-35, 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsumi et al. (US Pat. 4,318,718).

Utsumi teaches an electric dust collector (apparatus for conditioning air), comprising collector electrodes 3 and discharge wires 4 (emitter electrodes) that are vertically disposed (see abstract; Figs. 1-5; col. 2, ln. 21-32).

Each discharge wire has a slider 9 (cleaning mechanism) fitted over so that the slider can move up and down to frictionally remove debris from the wire electrode. Utsumi further teaches the slider comprises a collar 8 and a brush 19 that are non-conductive (insulating material) (see Fig. 6; col. 3, ln. 42-51). The collector electrodes and the wire electrodes are substantially parallel with each other (see Fig. 6).

Utsumi does not teach the electrodes to have the configuration and size as presently claimed. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the configuration and size of the electrodes would have been designed in a way that would have brought more benefits depending upon user's preference and intended use. A hollow electrode, for example, would have been lighter and easier to handle, and a U shape would have provided more surface area to collect more dust particles, and thus providing better air quality.

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With respect to the position of the electrodes relative to one another, it would have been obvious to one of ordinary skill in the art that the position of an electrode would have no significant patentable weight. The position of an electrode would have been adjusted to obtain the desired results in the airflow. See MPEP 2144.04 IVA, IVB, VIC.

### ***Response to Arguments***

8. Applicant's arguments filed 5/30/2006 have been fully considered but they are not persuasive.

In response to Applicants' arguments that none of the references would teach or fairly suggest the electrodes positioned relative to each other as presently claimed, it is noted that the position of an electrode would have been adjusted in order to obtain the desired results in the airflow, and thus would have no significant patentable weight.

The same arguments are presented with respect to the configurations and sizes of the electrodes.

Applicants are reminded that limitations relating to the size, shape, and position are not sufficient to patentably distinguish over the prior art. See MPEP 2144.04 IVA, IVB, VIC.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thao T. Tran  
Primary Examiner  
Art Unit 1711

tt  
August 7, 2006